

FINDING OF NO SIGNIFICANT IMPACT

PROPOSED ACTION: FAMCAMP Master Plan

PROPONENT: United States Air Force, Air Force Academy

An environmental assessment was prepared for proposed expansion of the family campground (FAMCAMP) area. This assessment is of the FAMCAMP Master Plan in the sense that it contains all expansions or improvements envisioned by the Academy in the Services Long-range Capital Improvements program, FY 04-08. It also documents the more substantial environmental consequences of any further expansions, should such expansions be considered in the future.

BACKGROUND: Pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321, *et seq.*, the President's Council on Environmental Quality (CEQ) regulations, 40 CFR 1500-1508, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, as promulgated at 32 CFR Part 989, the U.S. Air Force conducted an assessment of the potential environmental consequences of the proposed action and its no action alternative, both as solitary actions and in conjunction with other activities. This Finding of No Significant Impact (FONSI) summarizes the results of the evaluation of the proposed plan. The discussion focuses on activities that have the potential to change the human environment, both in natural and societal aspects.

PROPOSED ACTION: Alternative 1:

Using the existing site, expand/improve the operation by:

1. Constructing nine additional recreational vehicle sites to include gravel pads and water, electric, and sewer utilities.
2. Upgrade 27 existing RV sites to full water, electric, and sewer utilities.
3. Construct a new permanent 1066 sq. ft. support building that includes an office, public restrooms, and laundry facilities.
4. Construct a new permanent 840 sq. ft. support building that includes showers, public restrooms, and laundry facilities.
5. Pave with asphalt the entrance drive (350 yards long 22 yards wide). Pave with gravel interior roads to the new sites. Minimal landscaping (restoration) to match existing sites.
6. By the above, increase the patron population by 8%. Peak estimated population growing from 275 to 295.

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14. ABSTRACT This environmental assessment (EA) contains an analysis and an assessment of the environmental consequences associated with construction activities concerning the USAF A family campground (FAMCAMP). The EA considers potential impacts of the Proposed Action and the No Action alternative both as solitary actions and in conjunction with other activities.					
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FAMCAMP supports the Academy mission directly by providing low-cost camping facilities for cadets' families, especially during events such as Parent's Weekend, Graduation, and home football games. It also supports the 10th Services Squadron mission statement "to contribute to readiness and improve productivity through programs promoting fitness, esprit de corps, and quality of life for Air Force people." The need for permanent facilities is driven by the increased number of available camping sites and increased population. Air Force standards for family campgrounds, as described in AFH 32-1084, require permanent support facilities.

ALTERNATIVES: A No Action alternative was considered, as well as a re-configuration and expanding in a more limited fashion.

SUMMARY OF FINDINGS: The EA evaluated the impact of the Proposed Action, the No Action Alternative, a new location (to be determined) and a limited expansion, assessing any changes to the natural and societal aspects of the human environment. The Proposed Action will not result in significant adverse environmental impacts. No wetlands, floodplains, or Preble's mouse habitat is affected. The EA does indicate however, that the cumulative impact of FAMCAMP's past expansions, together with this proposal, have stretched the limits of the microenvironment, and detrimental environmental effects are occurring, such as unauthorized foot trails and loss of Stadium Boulevard visual buffer. The unplanned nature of a transient residential community on the Academy also creates unforeseen vehicle traffic and security/law enforcement issues, and the community's size should be minimized.

Summary of Environmental Impacts				
Environmental Category	Alternative 1 Proposed Action	Alternative 2 No Action	Alternative 3 Reconfiguration	Alternative 4 Limited Expansion
Preble's mouse habitat	No direct effect	No effect	Greater potential impact than #1	Less than #1
Wetlands	No effect	No effect	Greater potential impact than #1	Less than #1
Floodplains	No effect	No effect	Greater potential impact than #1	Less than #1

Forestry	Loss of trees, increased wildfire potential	No effect	Greater potential impact than #1	Less than #1
Visual Impact	Requires extensive natural screening	No effect	Greater potential impact than #1	Less than #1
Airfield Accident Potential Zones	Permissible construction	No effect	Greater potential impact than #1	Less than #1
Air Quality	Minimal, county fugitive dust permit	No effect	Greater potential impact than #1	Less than #1

Other Water Resources	Minimal, EPA stormwater permit	No effect	Greater potential impact than #1	Less than #1
Safety and Occupational Health	Positive, more efficient traffic flow and vehicle safety	No effect	Greater potential impact than #1	Less than #1
Hazardous Materials/Waste	Normal construction activity	No effect	Greater potential impact than #1	Less than #1
Other Biological Resources	Increased human activity near wildlife corridor	No effect	Greater potential impact than #1	Less than #1
Other Cultural Resources	No effect	No effect	Greater potential impact than #1	Less than #1
Geology and Soils	Erosion control required	No effect	Greater potential impact than #1	Less than #1
Socioeconomic	Customer benefit and revenue	Loss of opportunity	Greater potential impact than #1	Less than #1

MITIGATIONS: None required. Although not required for a Finding of No Significant impact, Best Management Practices will be undertaken as outlined in the "USAFA Overarching Environmental Specifications". This includes issues such as soil erosion during construction, removal of vegetation, and noise during construction.

FINDING OF NO SIGNIFICANT IMPACT (FONSI): Based on the attached environmental assessment conducted in accordance with the requirements of NEPA, CEQ regulations, and AFI 32-7061, as promulgated in 32 CFR 989, and by virtue of the mitigation listed above, I find the proposed action of an expansion to FAMCAMP as outlined will have no significant individual or cumulative impacts upon the environment. An environmental impact statement is not warranted and one will not be prepared.

APPROVED:



JAMES RIGGINS, Colonel, USAF
Chairperson
Environmental Protection Committee

21 Nov 03
DATE

United States Air Force Academy

Environmental Assessment

For

FAMCAMP Master Plan



October 2003



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Acronyms and Abbreviations

AFI	Air Force Instruction
amsl	above mean sea level
APCD	Air Pollution Control Division
AST	Aboveground Storage Tanks
CDOW	Colorado Division of Wildlife
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CNHP	Colorado Natural Heritage Program
CO	carbon monoxide
dBA	decibels on the A-weighted scale
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FAMCAMP	Family Campground
FONSI	Finding of No Significant Impact
GSF	Gross Square Feet
I-25	Interstate 25
INRMP	Integrated Natural Resources Management Plan
L _{dn}	day-night average noise levels
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
PM ₁₀	particulate matter <10 microns
PMJM	Preble's meadow jumping mouse
RV	Recreational Vehicle
SHPO	State Historic Preservation Officer
SV	Services
TSDf	Treatment, Storage, or Disposal Facility
TNC	The Nature Conservancy
USAFA	United States Air Force Academy
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tanks

ENVIRONMENTAL ASSESSMENT

FAMCAMP Master Plan

PROPOSED ACTION: Construct and alter family campground facilities on the U.S. Air Force Academy. Work identification is project 03-5001. The project consists of constructing two new buildings for office/laundry/restroom/shower functions, adding new full-utility recreational vehicle sites, upgrading utilities to existing sites, establishing gravel access roads, and paving the FAMCAMP entrance road. See following Executive Summary.

TYPE OF STATEMENT: Environmental Assessment (EA)

LEAD AGENCY: 10th Civil Engineer Squadron Environmental Division
(10CES/CEV)

ABSTRACT: This environmental assessment (EA) contains an analysis and an assessment of the environmental consequences associated with construction activities concerning the USAFA family campground (FAMCAMP). The EA considers potential impacts of the Proposed Action and the No Action alternative, both as solitary actions and in conjunction with other activities.

This EA is prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321, et seq., the President's Council on Environmental Quality (CEQ) regulations, 40 CFR 1500-1508, and Air Force Instruction (AFI) 32-7061, The Environmental Impact Analysis Process, as promulgated in 32 CFR Part 989.

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Executive Summary

PURPOSE

Provide summary environmental analysis of proposal to expand the USAFA FAMCAMP.

DISCUSSION

- USAFA Services proposes to expand FAMCAMP by constructing 9 new recreational vehicle (RV) sites with full utilities and adding full utilities to 27 existing sites. FAMCAMP currently has 109 camping sites of various types.

-- The proposal includes constructing a 1066 sq. ft. office/public restroom/shower building, and a 840 sq. ft. shower/laundry facility. Gravel access roads would be created, the portable office relocated, and the entrance drive paved.

-- The proposal is expected to increase the maximum summer transient residential population from approximately 275 people to 295.

- An expansion is needed to accommodate increasing Recreational Vehicle (RV) customer demand during the May -October 'Summer Season.' An expansion drives improvement of support facilities. FAMCAMP has continually expanded since its 1989 inception.

- In addition to improving customer service to eligible patrons, FAMCAMP is a moneymaker for USAFA Non-appropriated Fund activities.

- There is minimal to no impact by this proposal in the following environmental categories:

-- Wetlands and floodplains, and PMJM habitat are indirectly impacted only from the standpoint of general Academy development.

-- The east-west wildlife corridor north of FAMCAMP is indirectly impacted from a general increase in FAMCAMP population, not a direct loss of corridor width.

- FAMCAMP is somewhat unique in the local area in that it provides RV camping in a rustic setting.

- Continued unlimited expansion of FAMCAMP can be expected to be self-defeating. FAMCAMP popularity is due to the rustic, isolated, and quiet setting, which diminishes with each expansion.

- Continued unlimited expansion of FAMCAMP will incrementally impact a variety of USAFA activities including vehicular traffic, security, and visitor flow patterns. FAMCAMP is becoming a 'small village,' not envisioned when the Academy was designed.

- The USAFA Area Development Plan recommends prohibiting a FAMCAMP expansion, citing potential conflicts with the contractor staging area and increasing FAMCAMP visibility. If this proposed action is approved, the deviation will be incorporated in the FY 04 revision of the 'Eastern Boundary' portion of the plan.

SUMMARY

- The proposed project by itself does not have a significant environmental impact. Unless unknown impacts are identified during the review process, a Finding of No Significant Impact (FONSI) is anticipated.

1.0 Purpose of and Need for the Proposed Action

1.1 Introduction

The United States Air Force proposes to construct an expansion to the Academy family campground (FAMCAMP) to accommodate additional patrons as well as make infrastructure improvements to the existing camping facilities. The action is located at the United States Air Force Academy (Academy) in Colorado Springs, Colorado.

As the existing facilities are full through most of the Colorado camping season, not only will this expansion increase the Academy's ability to serve additional eligible patrons, but will generate revenue to support other base services. As required by Air Force Handbook 32-1084, "Facilities Requirements," the FAMCAMP expansion has been based on market demand which has been validated by a Needs Assessment Study.

The U.S. Air Force Academy is located in the foothills of the Rampart Range north of Pikes Peak, which lies to the west of Colorado Springs, Colorado (Figure 1). The 18,455-acre Academy is situated along the Rocky Mountain Front Range, approximately 6 miles north of downtown Colorado Springs and 60 miles south of Denver, Colorado (see Figure 1). The Academy is relatively new among the national military institutions; it was established in 1954 and moved to its current location outside of Colorado Springs in 1958. The Academy is a one-base major command with all of the facilities and organizational structures common to traditional Air Force bases. Superimposed upon the typical base structure are all of the organizational and functional requirements of a fully accredited four-year college. Today, the base supports a resident population of nearly 9,000, which includes approximately 4,000 cadets. An additional 7,200 non-resident military, civil service, and contractor personnel work on the base. The mission of the Academy is to:

Inspire and develop outstanding young men and women to become Air Force officers with knowledge, character, and discipline, motivated to lead the world's greatest aerospace force in service to the nation.

(Much of the below description was taken from the Final Report prepared by Earth Tech for USAF Services - see References.)

This assessment is of the FAMCAMP Master Plan in the sense that it contains all expansions or improvements envisioned by the Academy in the Services Long-range Capital Improvements program, FY 04-08. It also documents the more substantial environmental consequences of any further expansions, should such expansions be considered in the future.

Historically, the national recreational vehicle market has grown at a rate of 1.2-1.4 percent per year. FAMCAMP visitor growth has been at 3.5% annually. The consumer most likely to own and operate a Class A recreational vehicle is a retiree approximately 65 years of age. The Peregrine Pines Family Campground recreational area, located between Stadium Boulevard and the railroad corridor near Academy Drive, provides a

semi-improved campground for Academy military (active duty, retiree, and family member) visitors. Its primary use is for visitors who travel using recreational vehicles (RV). A typical RV spot includes a concrete pad and allows for utility hookups (water, sewer, electricity) for each rig. Amenities such as satellite television and wireless telephone service are often included in services RV owners provide for themselves. Each site also has access to a picnic area and built-in grills. A typical RV site is a 'Drive thru' style with gravel roadways.

Visitors may park and connect their recreational vehicles to available utility service in a pristine setting. The FAMCAMP is located next to a picnic area that includes pavilions, a ball field and volleyball courts. It also provides relatively close access to BX, commissary, gas station, health center, and other USAFA facilities.

FAMCAMP currently has 109 total camping sites:

- 69 full service RV sites (electricity, water, sewer)
- 11 partial service RV sites (sewer only)
- 16 'dry' RV sites (no utilities)
- 12 tent sites
- 1 yurt site

Support facilities include an office (portable building), and a restrooms, shower, and laundry building (permanent building #9028). The portable building is not assigned a CE condition rating. Building 9028 is classified as in 'good' condition.

The FAMCAMP land area is approximately 22 acres in size, beginning 300-400 feet from Stadium Boulevard, extending 2500-2700 feet to the east. It is approximately 300-400 feet wide north-to-south.

This environmental assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA); the Council on Environmental Quality (CEQ) implementation guidelines; Air Force Instruction (AFI) 32-7061, "The Environmental Impact Analysis Process," as promulgated by Title 32 of the Code of Federal Regulations (CFR) Part 989; and other applicable federal, state, and local environmental laws and regulations. These federal regulations establish both the administrative process and substantive scope of the environmental impact evaluation, which is designed to ensure that deciding authorities have a proper understanding of the potential environmental consequences of a contemplated course of action, and that alternatives to that contemplated action have been considered.

1.2 Purpose, Need, and History

The purpose of this environmental assessment is to analyze a proposed action of increasing the capacity of FAMCAMP, with the twin goals of improved customer service and greater revenue.

The need for this proposal is a demand for more RV camping on USAFA, based on past full occupancies. An independent needs assessment study (NAS) determined a prospective customer base of 62,065.

FAMCAMP's history is one of continuing expansion.

FAMCAMP was constructed in 1989. Chronology of development:

<u>Year</u>	<u>Services Available</u>
1989	Total: 40 RV sites with electricity, 8 'dry' RV sites, 10 tent sites, 1 Yurt
1990-1992	No Change
1993	Total: 40 full service RV sites, 8 'dry' RV sites, 10 tent sites, 1 Yurt
1994	Total: 40 full service RV sites, 27 'dry' RV sites, 10 tent sites, 1 Yurt
1995	Total: 50 full service RV sites, 19 'dry' RV sites, 10 tent sites, 1 Yurt
1996-1998	No Change
1999	Total: 69 full service RV sites, 11 partial service RV sites, 10 tent sites, 1 Yurt
2000	Total: 69 full service RV sites, 11 partial service RV sites, 16 'dry' RV sites, 12 tent sites, 1 Yurt
2001-2002	No Change

During the 2000 camping season, 12,650 camping spaces uses were recorded. Recreational vehicles visiting FAMCAMP numbered 2,150.

1.3 Decisions to be Made

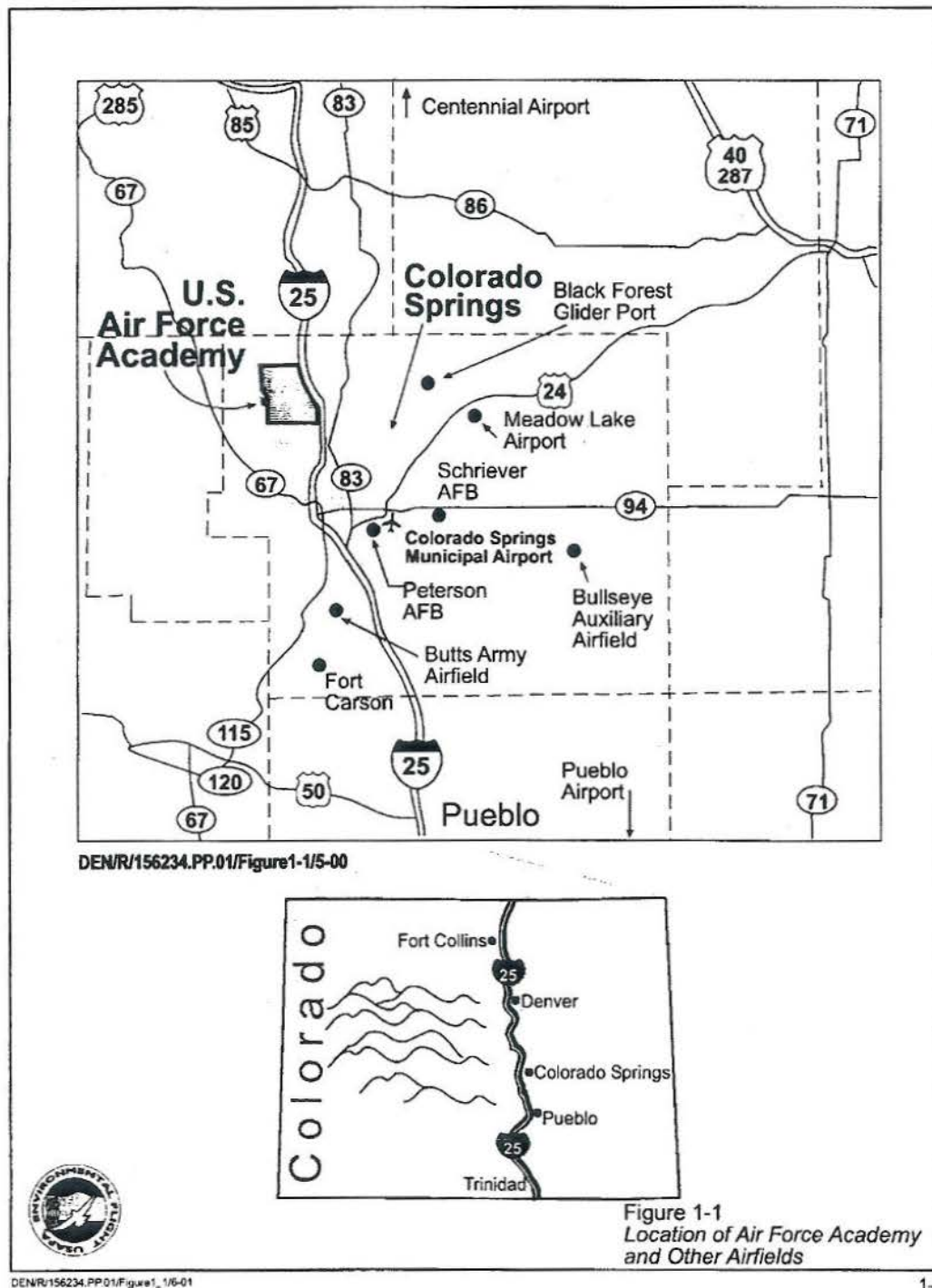
The analysis in this EA evaluates the potential benefits and environmental consequences of a variety of alternatives. The chairman of the USAFA Environmental Protection Committee must choose which alternative best meets the need, while minimizing adverse environmental impact. Based on this information, the Chairman of the USAFA Environmental Protection Committee will determine whether to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact

Statement (EIS). Because of the high visibility of the project, the Environmental Leadership Council will need to be briefed. As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project, and be available to inform decision makers of the potential environmental impacts of selecting the proposed or alternative actions.

1.4 Organization of this Environmental Assessment

This EA evaluates four alternatives. The approach used for this EA is to identify and describe the proposed and alternative actions in Section 2. Section 3, Affected Environment, describes the environment on and around the FAMCAMP area that could be potentially affected by the proposed or alternative actions. Section 4, Environmental Consequences, addresses potential impacts of the proposed or alternative actions.

Figure 1. Location of the Air Force Academy



2.0 Description of Proposed Action and Alternatives

2.1 Alternatives

2.1.1 Alternative 1 - Proposed Action - FAMCAMP Expansion (Figure 2).

Using the existing site, expand/improve the operation by:

1. Constructing nine additional recreational vehicle sites to include gravel pads and water, electric, and sewer utilities.
2. Upgrade 27 existing RV sites to full water, electric, and sewer utilities.
3. Construct a new permanent 1066 sq. ft. support building that includes an office, public restrooms, and laundry facilities.
4. Construct a new permanent 840 sq. ft. support building that includes showers, public restrooms, and laundry facilities.
5. Pave with asphalt the entrance drive (350 yards long 22 yards wide). Pave with gravel interior roads to the new sites. Minimal landscaping (restoration) to match existing sites.
6. By the above, Increase the patron population by 10% (peak population of 275 to 295).

The immediate effect on natural areas is approximately one acre total of disturbance throughout FAMCAMP including facility sitings, utility line installation, and access roads. Utility line trenches will be filled and restored. Approximately 20 trees will need to be removed.

The need for permanent facilities is driven by the increased number of available camping sites and increased population. Air Force standards for family campgrounds, as described in AFH 32-1084, require permanent support facilities.

A possible Master Plan, incorporating this proposed action, is included as Figure 3.

2.1.2 Alternative 2 - No Action

Continue to operate FAMCAMP with a deficit of full service campsites.

2.1.3 Alternative 3 - Different Configuration

Establish a different configuration of new FAMCAMP sites at the existing location. Details are discussed and evaluated in Section 4.

2.1.4 Alternative 4 - Limited Expansion

Expand the existing operation in a more limited fashion. Locate any new sites farther from Monument Creek and Preble's habitat. Details are discussed and evaluated in Section 4.

FAMCAMP UPGRADE & EXPANSION PROJECT

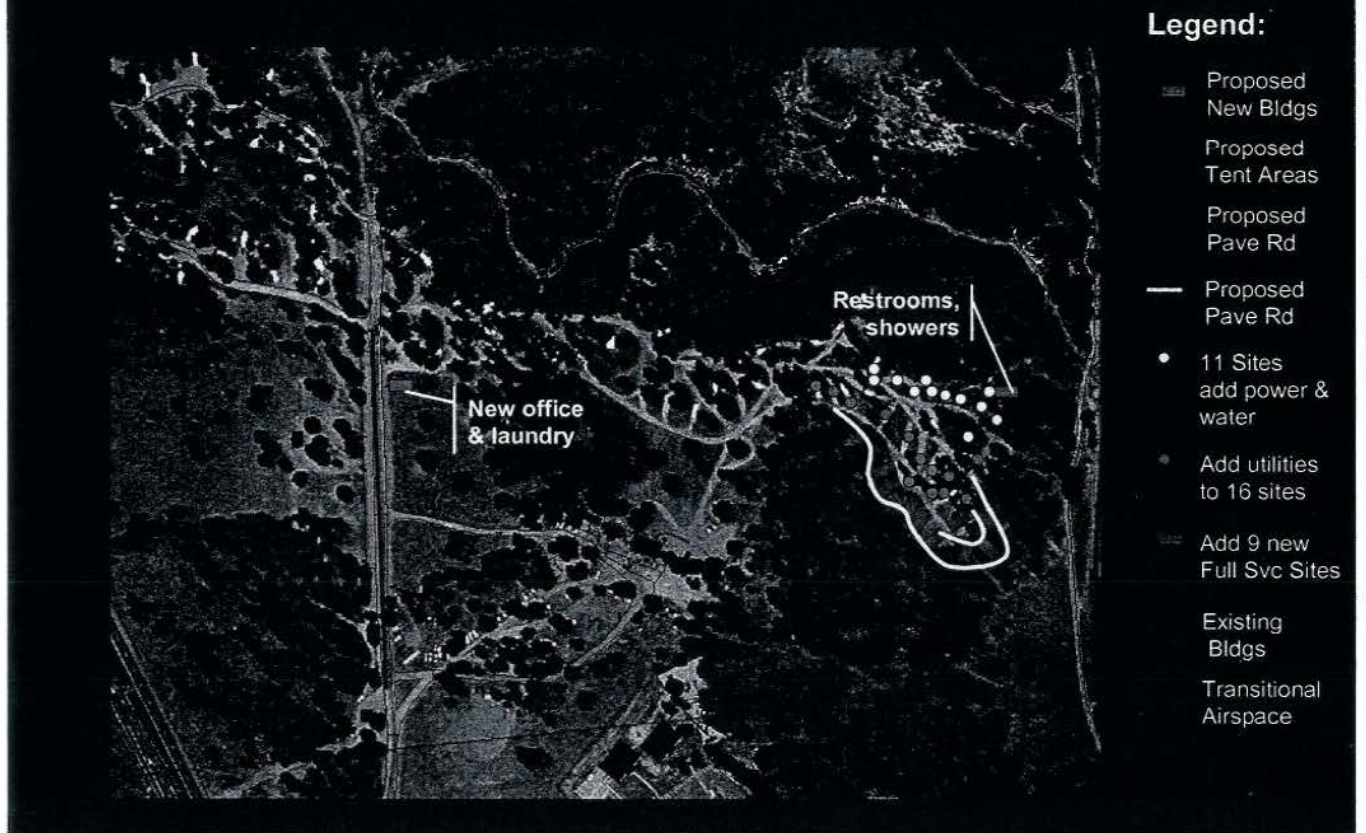
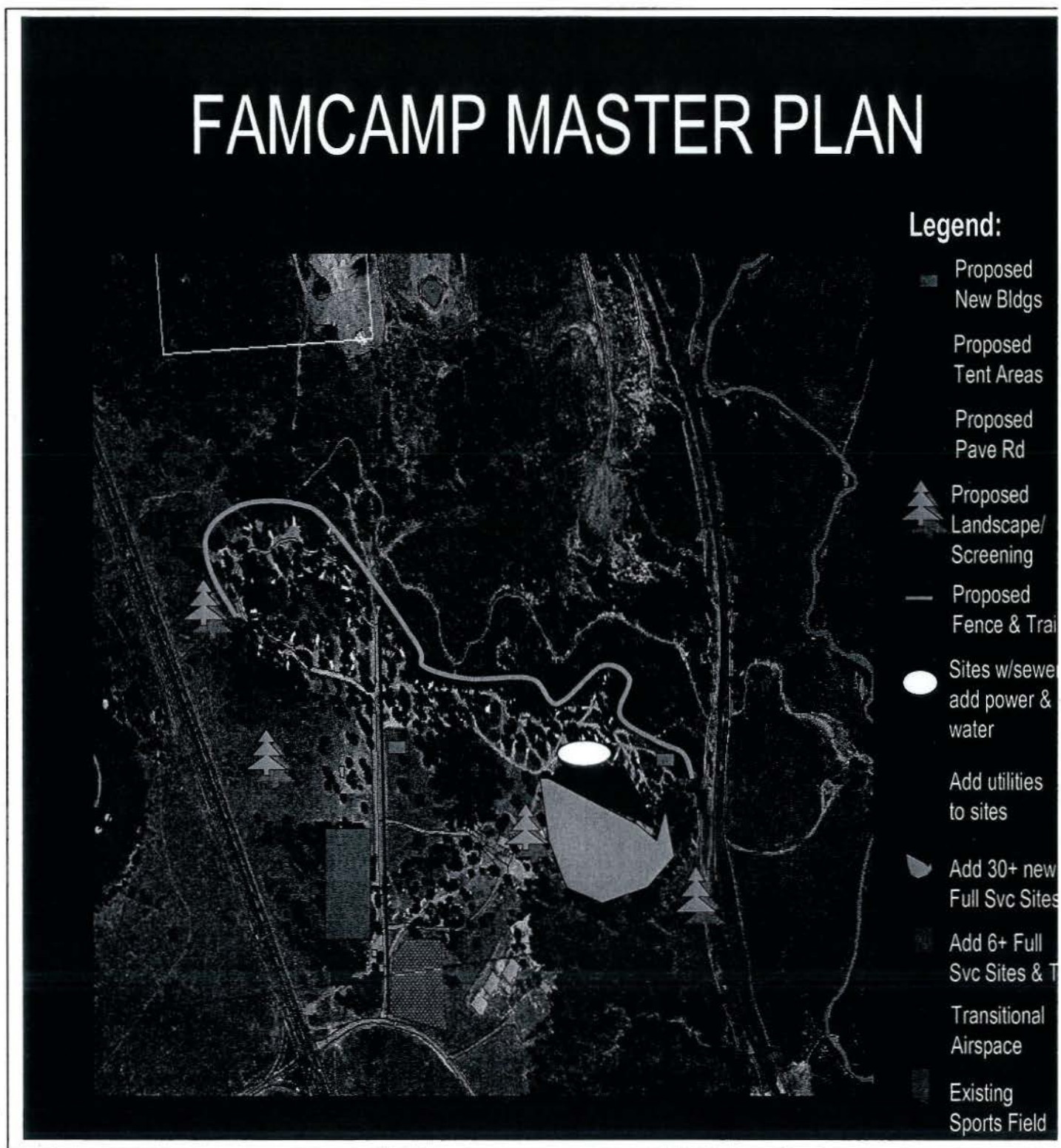


Figure 2. Proposed Action

Figure 3. Originally Proposed Master Plan



3.0 Affected Environment (See Figures 4-6)

The affected environment is the baseline against which potential impacts caused by a proposed action are assessed. This chapter describes the natural and societal aspects of the existing human environment.

3.1 Climate and Air Quality

3.1.1 Climate

The climate of the Academy is considered semi-arid with approximately 15 inches of annual precipitation. The majority of precipitation occurs between March and September during thunderstorms and occasional hailstorms. Snowstorms occur every winter, but blizzards are rare. Annual temperatures at the Academy range from a monthly mean of 30°F in January to 86°F in July. In summer, the average daily temperature is 68.4°F and the average daily maximum is 82.3°F. The highest recorded temperature was 100°F in June 1954. Temperature inversions are a common occurrence in the region, typically taking place during the winter months.

The average relative humidity ranges from approximately 35 to 45 percent, with the lowest levels occurring in mid-afternoon during the spring months. Humidity is higher at night in all seasons, and the average at dawn is about 63 percent. The percentage of sunshine is 72 percent in summer and 71 percent in winter. The prevailing direction of the wind is from the north-northeast. Average wind speed is 10.4 miles per hour (mph), with higher average speeds (12.2 mph) in April (Nakata and Associates [Nakata] 1992).

A key climate feature are the short duration, intense storms that erode soils and increase storm water runoff.

3.1.2 Air Quality

The area surrounding the Academy is currently in compliance with all National Ambient Air Quality Standards (NAAQS). The Colorado Springs metro area has been re-designated as a "maintenance" area for carbon monoxide (CO). Despite the re-designation, CO is and will continue to be the region's major concern, as increasing growth threatens to offset the effects of recent control strategies (CDPHE - Air Pollution Control Division [CDPHE- APCD] 1999).

The high altitude and adjacent mountains provide ideal conditions for temperature inversions, which reduce the area's ability to disperse pollutants. These occurrences can occasionally lead to PM₁₀ (particulate matter <10 microns) violations of NAAQS. Primary contributors of PM₁₀ violations are fireplace emissions and fine particulates generated from street sanding operations. Although the region currently shows

compliance with the fine particulate standard, further control strategies for PM_{10} are being considered.

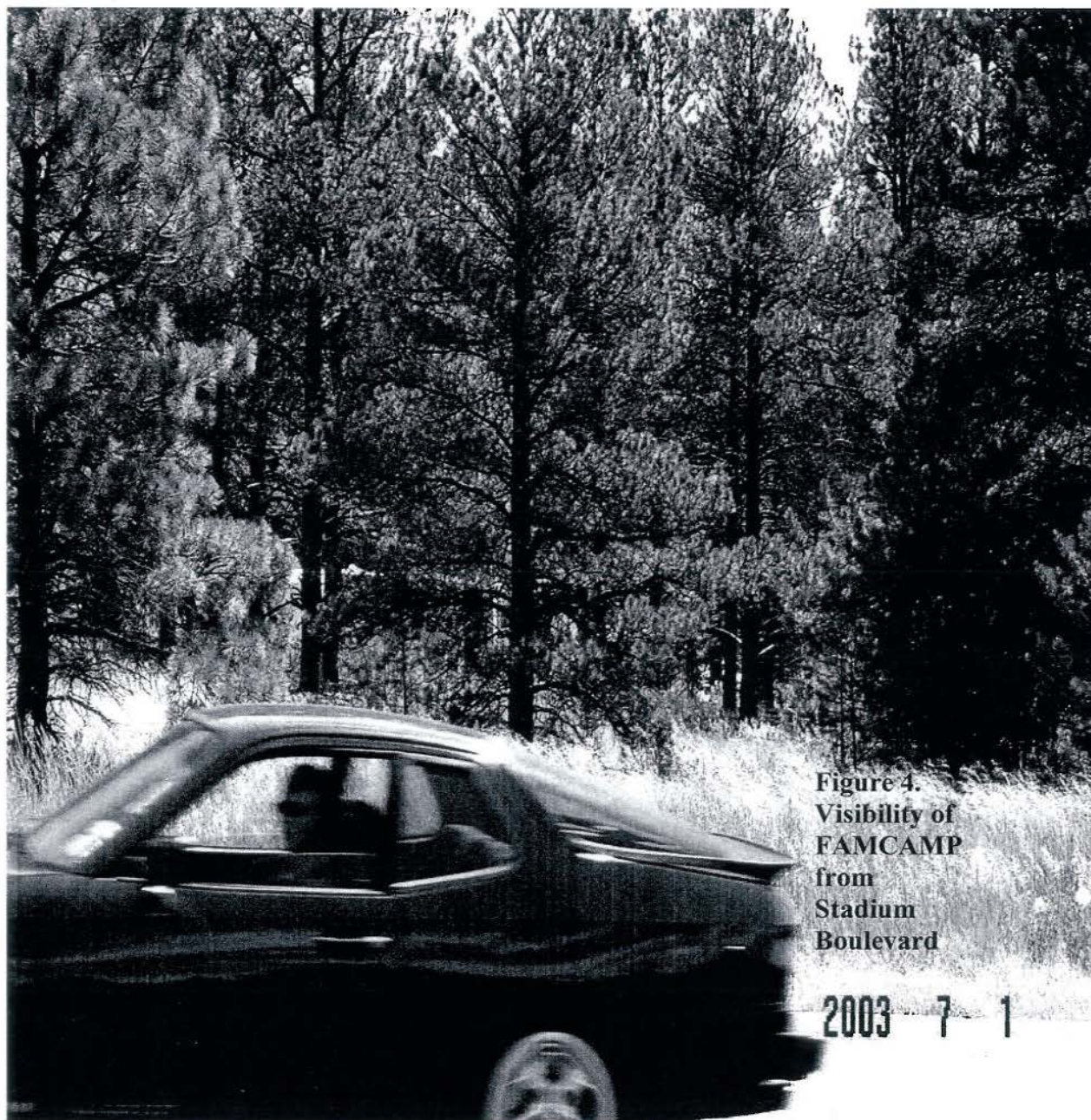
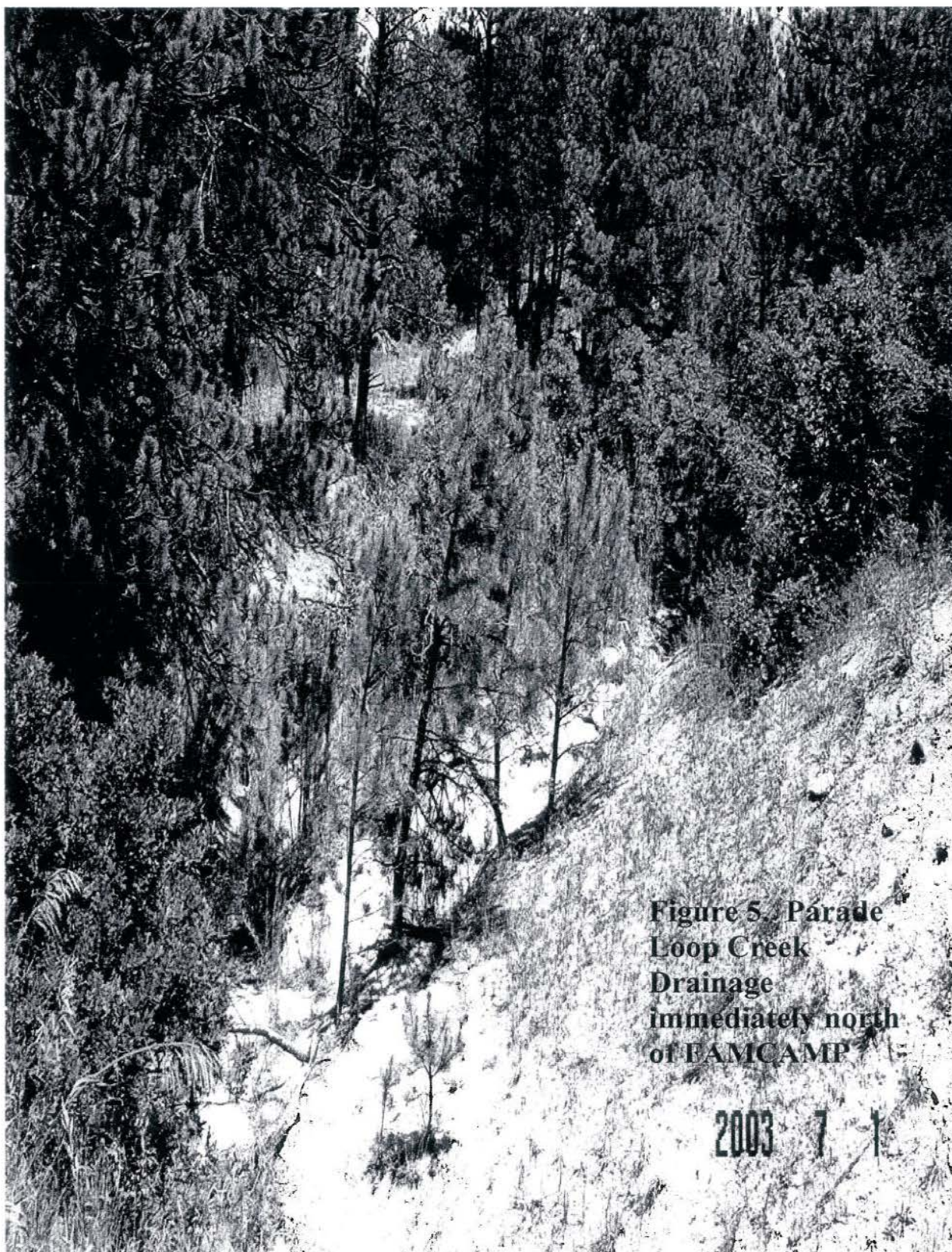


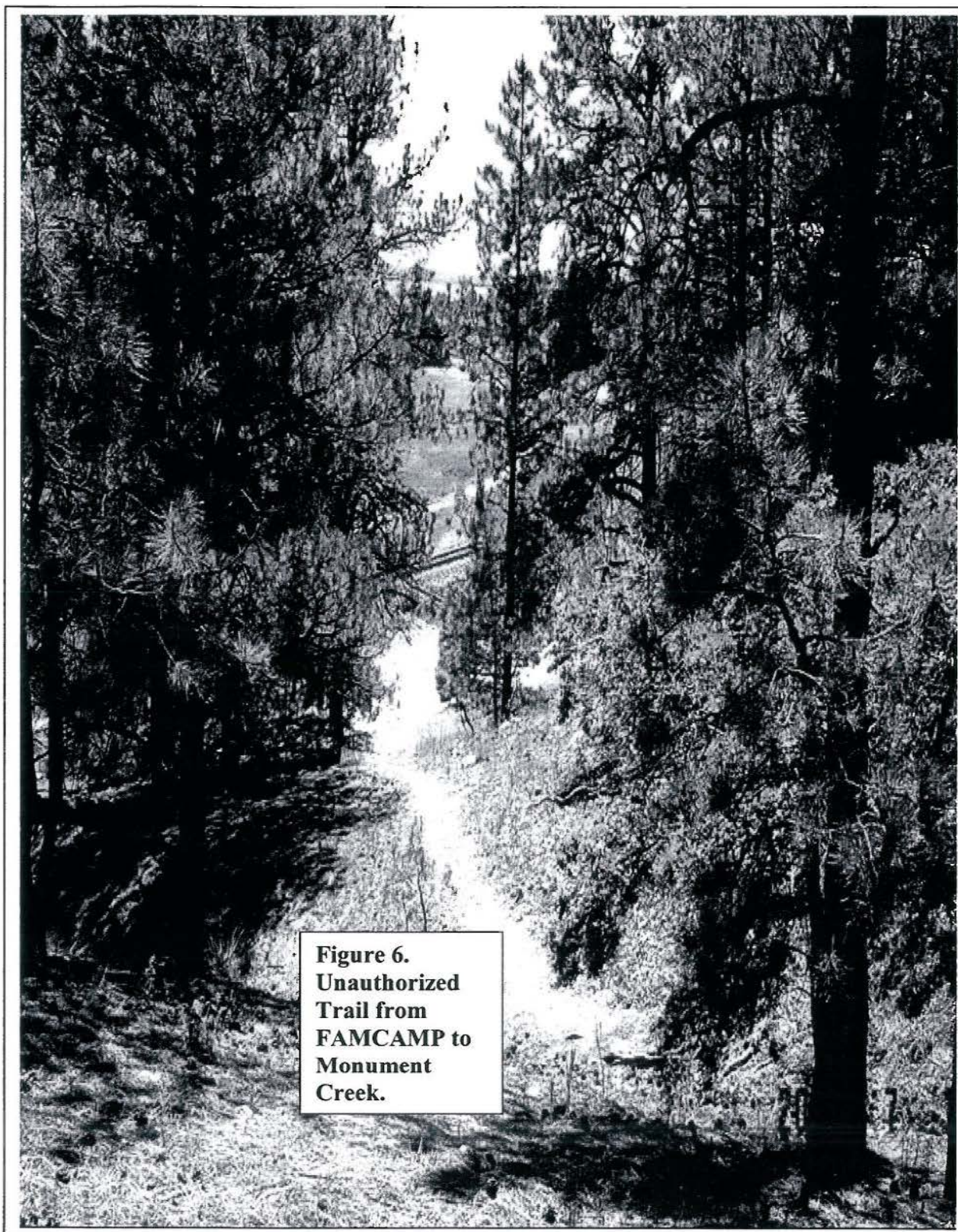
Figure 4.
Visibility of
FAMCAMP
from
Stadium
Boulevard

2003 7 1



**Figure 5. Parade
Loop Creek
Drainage
immediately north
of FAMCAMP**

2003 7 1



**Figure 6.
Unauthorized
Trail from
FAMCAMP to
Monument
Creek.**

3.2 Geology and Soils

3.2.1 Geology

The USAF Academy is located at the base of the Rampart Range. Elevations range from 6,235 to 7,900 feet. FAMCAMP is at approximately 6,600 feet amsl.

The Rampart fault, which runs north-to-south along the base of the Rampart Range, is quaternary in age with the earliest known displacement along the fault occurring sometime in the last 1.8 million years (Howard et al. 1978). The U.S. Geological Survey (USGS) National Earthquake Information Center considers the Academy area to be relatively aseismic. No earthquake epicenters have been recorded in the Academy area since 1800, and the nearest event was a magnitude 2.9 on the Richter Scale recorded in 1979 with the epicenter approximately 25 to 30 miles west of the Academy.

3.2.2 Soils

Most of the soils at the Academy are originally derived from a granitic parent material. They are generally shallow (horizons are not defined) and have very little fine or organic material. The soils are generally alluvial (water-deposited) or residual (accumulating from decomposed rock) in deposition and are largely subsequently derived from the Dawson Arkose sedimentary rock. The soil in the FAMCAMP area defined as Kettle Gravelly Loamy Sand, at 3-8% slopes. It is coarse grained with moderate frost potential. Kettle series soils are deep and well drained, are often associated on the Academy with forested terrain.

These are easily eroded soils affected by Colorado Spring's short duration intense storms. Erosion and deposition of sediment are regional problems.

3.3 Water Resources

The FAMCAMP area is not directly within a wetland system nor an established 100 year floodplain. It is part of the Lehman Run watershed. The nearest surface water feature that could be considered a wetland is the northern physical boundary of FAMCAMP, Parade Loop Creek, which flows into Monument Creek. Parade Loop Creek is an intermittent streambed. This feature has well-defined bed and banks, and most likely flows in the spring and/or during and immediately after precipitation events. Well south of FAMCAMP is Lehman Run, which flows into Non-potable Reservoir #1.

3.4 Biological Resources

3.4.1 Vegetation Resources

FAMCAMP is sited in an upland pine forest that has been fragmented by past development and tree removal. Ponderosa pine woodlands are the most prevalent forested community in the Academy's foothills. Multiple age classes are represented, although young pines are limited. This community occurs on sites drier than those supporting Douglas fir/white fir, but moister than those dominated by grassland. Trees are often clumped in groups of a few individuals separated by openings with a sparse herb cover in a park-like setting. Common associates are gooseberries and currents (*Ribes aureum* and *R. cereum*), yellow mountain parsley (*Pseudocymopterus montanus*), mountain muhley (*Muhlenbergia montana*), ninebark (*Physocarpus monogynus*), and Gambel oak (*Quercus gambelii*). All Academy pine forests are under severe stress from the individual and cumulative effects of drought, mountain pine beetle (*Dendroctonus ponderosae*), pine engraver beetle (*Ips spp.*), needle miners (*Coleotechnites ponderosae*), and/or dwarf mistletoe (*Arceuthobium spp.*).

3.4.2 Wildlife Resources

FAMCAMP's northern physical boundary is a seasonal streambed, Parade Loop Creek. Wildlife routinely utilize the area north of FAMCAMP and within FAMCAMP as a travel corridor. Elk, turkey, and mule deer routinely utilize this area to access Monument Creek. No other wildlife corridors are available for Monument Creek access within the nearby area. Wildlife use is limited during the spring/summer season by the human activity (camping) in the area,

Mammals in the ponderosa pine woodlands include American elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), Abert's squirrel (*Sciurus aberti*), black bear (*Ursus americana*), and coyote (*Canis latrans*). Common birds are wild turkey (*Meleagris gallopavo*), broad-tailed hummingbird (*Selasphorus platycercus*), Williamson's sapsucker (*Sphyrapicus thyroideus*), pygmy nuthatch (*Sitta pygmaea*), and magpie.

3.4.3 Protected Species

The greenback cutthroat trout (*Oncorhynchus clarki stomias*) and the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) are the only federally listed species residing on the Academy that are protected by the Endangered Species Act. No suitable habitat occurs directly in the immediate area of the proposed action, although the area is bounded by Preble's mouse habitat one mile to the north, 1/2 mile to the south, and a few hundred feet to the west. Although the railroad track provides a physical boundary with Monument Creek habitat to the further west, it is possible FAMCAMP visitors may hike near Preble's mouse habitat.

3.5 Cultural Resources

The Academy Area Development Plans (2000) show two cultural resource sites within the FAMCAMP area (Page 7.10, Exhibit 7). Further investigation showed this to be in error. The baseline Academy document, the 1996 Cultural Resources Survey, showed one site, State Site number 5EP2267, also coded UCCS 94-29. The site type is listed as "Historic foundation/trash." The site was evaluated using National Register of Historic Places criteria, determined not eligible, and the survey team recommended no further work. The specific 1996 write-up was:

"Setting: The site is located on the top of a ridge approximately 75 meters from a slope to the east. Vegetation consists of ponderosa pine, grasses, and sage. The soil is fine, light tan sand with sparse gravel, below a layer of pine needles. Elevation is 6,700 feet.
Description: The site is a foundation that is now used for a refuse dump. A stone and cement foundation with re-bar looks like a former building site that has been used as a refuse dump from c.1950s to recently. The site is near the present day campsite and pre-school. Artifacts consist of various glass and ceramic fragments, along with construction materials. The site covers approximately 280 square meters (0.07 acres).
Culture/Age: Euro-American/Early 20th century."

See also Section 3.6.5, Land Use.

3.6 Socio-Economic Resources

Socioeconomic resources to be considered for the project are: socioeconomic setting, recreation, environmental justice, hazardous waste, land use, noise, and transportation.

3.6.1 Socio-Economic Setting

The Academy daytime population is approximately 9,285, approximately 50 percent of whom are cadets. The balance of the population consists of command, wing, faculty, and support personnel who are either military personnel or civilian employees.

The Academy contributes significantly to the economy of El Paso County. The total economic impact on this region totals approximately \$470 million, with an estimated 9,739 military and civilian jobs created by Academy activities. The primary source for these data is the U.S. Air Force Academy Economic Impact Analysis, 1998.

The current FAMCAMP transient residential population varies widely, with approximately 235 patrons during the summer peak occupancy period.

3.6.2 Recreation

FAMCAMP itself is a recreational facility, and patrons will include family members (ID card holders) of cadets. Although FAMCAMP is operated as a year-round facility, the occupancy is very seasonal with nearly all of the usage occurring during the "summer season" months of May through September and "football weekends" during October. Nearby are picnic areas, a ball field, and volleyball courts. FAMCAMP is also near the Academy football stadium. The nearest other recreational facilities are in the Community Center 2-3 miles away.

3.6.3 Environmental Justice

Environmental Justice considerations are the result of an Executive Order (EO 12898) designed to focus attention on the human health and environmental conditions in minority and low-income communities. Concentrated areas of low income, minority, and disadvantaged residents do not exist within the Academy.

3.6.4 Hazardous Waste

Activities at the Academy generate small quantities (100 to 1,000 kilograms per month) of hazardous waste.

The Academy has a spill prevention program, as well as a hazardous waste management plan. Copies of applicable material safety data sheets (MSDS) can be obtained from the Academy's Hazardous Materials Pharmacy.

3.6.5 Land Use

FAMCAMP is under 'transitional airspace' from aircraft/airfield activities, but due to the height of all vehicles and facilities being below tree line, there is no conflict.

Land use in FAMCAMP directly affects the rest of the Academy in two main categories: the facilities themselves and the 'open space' requirements of Academy master planning. Indirect effects are due to the size of an unforeseen transient residential community, and are listed under each environmental attribute.

The Academy is in the process of placing the campus on the National Register of Historic Places (NRHP) as a historic district. The only structure in the FAMCAMP area listed on Academy real property records is building 9028, 'Family Camp Facility,' constructed in 1999. Building 9028 is a restroom/shower/laundry facility. The registration form lists building 9028 as a 'Noncontributing Building.'

The Campus Plan, however, is listed under 'Other Contributing Resources.' The Campus Master Plan was developed by the architectural firm Skidmore, Owings and Merrill (SOM) in 1955. It is central to the historic character of the historic district with its creative use of the site's topography. The Master Plan treated open space as essential to the overall concept. The 1988 Land Use Plan by SOM stated: "It is the medium in which the built areas are presented and thus contributes to the unity and harmony which makes the Academy a distinctive place."

The functional "communities" -- the Cadet Area, Neighborhoods, Community Center, Airfield and Service and Support -- are surrounded with open space, serving as a buffer for the transition between the built environment and the natural surroundings.

Contributing features to the Overall Academy Master Plan include:

- Road circulation system, including overlooks. Particularly important are the use of single-loaded roads through functional areas as well as transitional open spaces.
- Spatial arrangements and land use based on functional areas.
- All views.
- Vegetation in open spaces.

A family campground tourist area was not originally planned during the foundation of the Academy. FAMCAMP is sited next to picnic areas that were originally considered by the 1988 Land Use Plan. The Academy Area Development Plan recommends prohibiting expansion of FAMCAMP, citing additional growth as potentially conflicting with nearby land use and increasing FAMCAMP visibility.

An unplanned 'social' trail is shown at Figure 6.

3.6.6 Noise

The existing noise environment is characterized by existing ambient noise levels, noise sources, locations of noise-sensitive land uses near the proposed project, and terrain that could provide potential noise barriers.

Noise levels on the Academy are generally low at most times. Existing land use patterns suggest that ambient levels would likely be below 40 decibels on the A-weighted scale (dBA) in undeveloped areas.

Some RV owners use generators on sites that do not have electricity, causing noise for other campers.

3.6.7 Transportation

According to the USAFA Transportation Master Plan, traffic volumes in 2000 (latest recorded) were 20,064 vpd (vehicles per day) for the south entrance and 7,891 vpd for the north entrance. The traffic volume has increased by 24% between the years 1990 and 2000. The reasons listed in the Transportation Master Plan are:

- More Air Force personnel living off-base.
- A greater number of students at Air Academy High School.
- Greater numbers of civilian employees.

- More cadet vehicles at the Academy.
- Greater number of visitors.

The Academy spends approximately \$6 million per year in roadway repair for damage caused primarily by vehicles and weather effects.

Road design assumptions the paving of the FAMCAMP access road are:

1. Vehicles are motor homes, trailers, 5th wheels, and campers (RVs).
2. 105 sites are used 6 months per year, with 100% occupancy on weekends and 75% occupancy on weekdays.
3. RVs move with one trip in and one trip out.
4. Large motor homes are 25% of the RV traffic.
5. Smaller (22,000 pound class) motor homes, trailers, and 5th wheels are 50% of the RV traffic.
6. The remaining 25% RV traffic is composed of the smallest size motor homes & trailers.
7. Automobiles make twice as many trips as RVs.

3.7 Visual and Aesthetic Values

When the Academy was master planned in the 1950s, views and scenic quality were major determinants of the placement of roads, facilities, and the Cadet Area. The Academy's scenic quality is also important to the City of Colorado Springs and is a dominant visual feature of the approach to the City along Interstate 25. The *Area Development Plan* Exhibit 6 shows two views of concern from Stadium Boulevard, northwest and southwest. The desired effect is that no FAMCAMP facilities should be seen from Stadium Boulevard.

Unfortunately, FAMCAMP vehicles can already be seen from Stadium Boulevard.

4.0 Impacts and Mitigations

The discussion below focuses on impacts from a FAMCAMP expansion. Construction may have impacts, but these are expected to be minor and transitory, to be contained by Best Management Practices. The discussion focuses on Alternative 1. Alternative 2, No Action, would have no environmental impact other than a societal impact of lost revenue, opportunity, and somewhat greater demand on Colorado Springs like resources. Alternative 3, a substantially different configuration, would have a greater environmental impact than Alternative 1, since the sitings proposed have been selected primarily to take advantage of the existing built-up areas. A different configuration would likely change vehicle traffic patterns and/or expand into the forested viewshed boundary to the east, the streambeds to the north and west, or the recreational area boundary to the south. Alternative 4, a more limited proposal, would obviously reduce natural environmental impacts, but not to a degree of substantial improvement to the situation. There would be a societal impact to the human environment in terms of opportunity lost.

4.1 Climate and Air Quality

4.1.1 Climate

No impact.

4.1.2 Air Quality

During construction, all action alternatives will have minor and transitory impacts on air quality. These impacts will be primarily from particulates released during and from any vehicular traffic that disturbs the vegetative cover of the land surface. In addition, vehicular exhaust from equipment used during construction will slightly diminish the air quality. None of these emissions is expected to be substantive, and none will extend beyond the construction/reclamation period. Standard management practices for construction such as minimizing areas of disturbance, watering areas that must be disturbed, and reclamation of disturbed areas will be employed. These will minimize contributions of this project to the occasional PM₁₀ exceedance that occurs in the vicinity of the Academy.

According to Services personnel, the #1 customer compliant concerns dust raised from vehicle traffic, hence the proposal contains 3,380 square yards of asphalt paving on the entrance road.

4.2 Geology and Soils

4.2.1 Geology

No impact.

4.2.2 Soils

Any use of heavy equipment will disturb the soil surface. All of these impacts will be localized. Any potentially resulting tendency for surface soil to become wind blown or erode can be minimized through rapid reclamation after construction and use of "silt dams" during construction.

Both during construction and also to increased occupancy, soil erosion will increase. Additional campers are likely to increase both the number and size of unauthorized trails.

4.3 Water Resources

Wetlands and floodplains are sufficiently distant not be directly impacted by any alternative. Any change to from natural soils to roadways and parking reduces the permeation of water into the ground. Due to the high permeability of surrounding soils, runoff is not expected to be substantial for the action alternatives, it will inevitably increase incrementally due to these action alternatives. The long-term consequences of the proposed construction project are not anticipated to be of a level to warrant special consideration under EPA permitting. The inevitable petroleum drippage from the increased number of vehicles will contribute incrementally to ground water quality degradation. Additional mitigation for this incremental increase is neither necessary nor desirable, but the effect should be noted if further expansions should ever be proposed.

4.4 Biological Resources

4.4.1 Vegetation Resources

Some trees, grasses and forbs can be expected to be removed during construction. Increased vehicle and pedestrian traffic will naturally compress soils around the ponderosa pines trees, contributing to the high stress already prevalent in Academy pine forests and resultant loss of trees.

Simply by increasing the number of recreational vehicles on the Academy, there is a minor potential increase for non-native plant seeds to be distributed. Monitoring of plant infestations and removal actions may have to be increased.

Vegetation trampling will increase due to increased FAMCAMP occupancy.

Potential for wildfire increases anytime there is an increased human population in a wooded area, and fire safety standards will need to be rigorously enforced.

In order to shield FAMCAMP activities and vehicles from Stadium Boulevard, the available 90 yard wide space will need to be intensively planted with ponderosa pine trees. The greater expansion suggested by the possible FAMCAMP Master Plan

(Figure 3) will result in visibility of vehicles from Stadium Boulevard and a deviation from USAFA master planning principles.

Effective pine tree screening is expected to take a minimum of 15 years. According to the Academy Forester, ponderosa pine trees should be planted no closer than 10-12' apart.

4.4.2 Wildlife Resources

It can be anticipated some wildlife will move to adjacent undisturbed areas, however such areas are limited. The proposed action will also increase human activity attractants (trash, outdoor cooking, small pets) for wildlife such as bears and mountain lions. Human/wildlife conflicts are expected to increase. There will be further fragmentation of the wildlife corridor between Monument Creek and areas to the west of Stadium Boulevard.

4.4.3 Protected Species

No direct impact on the Preble's mouse is anticipated, due to the physical barriers (railroad bed), and the distance to suitable habitat along Monument Creek. However, as the population of FAMCAMP increases, wandering tourists are more likely to enter habitat. This is not considered a significant problem unless the frequency of visits begins to create trails. No impact on the greenback cutthroat trout is anticipated since the proposed project does not involve the non-potable reservoirs where this species has been stocked in the past.

4.5 Cultural Resources

Since the idea of a family campground was not envisioned by the Academy planners, its existence and expansion do not embrace the master planning considered part of the criteria for the Academy to be listed as a historic district. However, the FAMCAMP area remains shielded for the most part from the view from Stadium Boulevard. There is no impact on cultural resources by this proposal. However, future growth beyond this proposal could impact cultural resources in terms of the viewshed from Stadium Boulevard.

4.6 Socio-Economic Resources

4.6.1 Socio-Economic Setting

The proposed action increases FAMCAMP patronage, and thereby the potential for safety concerns with patrons wandering into adjacent industrial areas. Education of patrons concerning Academy area restrictions will be needed.

By means of the Independent Needs Assessment Study prepared for USAFA Services, the cost payback is expected to be less than 20 years.

4.6.2 Recreation

The increased FAMCAMP patron population size on the Academy will impact availability of other recreational assets (golfing, bowling, and fishing), but the impact is minor.

4.6.3 Environmental Justice

No impact.

4.6.4 Hazardous Waste

Construction contractors will be required to follow Academy hazardous waste disposal procedures to ensure regulatory compliance.

Any additional population, even a transient one, has the potential to increase hazardous waste on the Academy. However, the amounts generated should be small and patrons can drop out any hazardous wastes at the USAFA Hazardous Waste Site, where the items will be further disposed of by professional technicians.

4.6.5 Land Use

During the nearly 50-year history of the Academy, the natural open space areas have been gradually encroached on by the construction of buildings, broadly cleared rights-of-way, a growing network of dirt roads and trails, parking areas, and the introduction of exotic species. There has been a recent desire for services and facilities to support the growing community of retirees. Unless carefully coordinated, such facility expansion may have unintended, adverse consequences. Natural areas are decreasing in size and connectedness, which are two critical wildlife management issues. To meet natural resources goals, there is a need to develop plans to reduce or mitigate the potential ecological impacts related to development.

The *Area Development Plans* for the Academy show in detail by sub-area, where open space is located and where constraints to development within the sub-area exist. This project is not in consonance with the current *Area Development Plans*, which recommended against any further expansion in order to protect natural areas, as outlined throughout this section. Decision-makers are not bound by plans, but should deviate from past planning with knowledge of the consequences envisioned by plan creators. As potential projects integrate into existing Academy infrastructure and compete for land use, increasing consideration should be given to the *Area Development Plans*, as well as the *Integrated Natural Resources Management Plan*.

The increasing number of transient residents can be expected to develop more unplanned 'social' trails in the natural areas, and both patron education and rule enforcement will be necessary. For example, both the existing FAMCAMP website and written flyer can be used to promulgate rules restricting natural area activities in the same way that rules regarding pets are publicized.

4.6.6 Noise

Further expansion to FAMCAMP could generate significant impacts to the environment. The following actions can maximize the benefits of FAMCAMP and minimize the consequences.

#1: Follow the USAFA Overarching Environmental Specifications during construction to ensure compliance with environmental laws and regulations, as well as minimize any environmental damage. This includes issues such as soil erosion during construction, removal of vegetation, and noise during construction.

- Any minor ground disturbance shall be reseeded with a locally adapted native seed mix.
- Trees will be removed for sale or compost in accordance with Academy forestry procedures.

#2: Increase ponderosa pine tree plantings along Stadium Boulevard, with appropriate irrigation and pest maintenance to foster tree survivability. This action will enhance the natural environment experience for FAMCAMP transient residents as well as visually hiding a vehicle campground appearance from Stadium Boulevard.

#3: Consider providing a boundary fence around portions of the FAMCAMP area. The fence should present a rustic appearance. This management practice provides primarily a psychological boundary for FAMCAMP visitors from wandering into natural and industrial areas of the Academy, where their activities would be restricted for environmental and safety reasons. The positive benefit of a boundary should outweigh the negative effect of fence construction.

#4: Change the Area Development Plan to accommodate this expansion, but no further growth. Do not allow any further expansion especially west of the FAMCAMP access road, as there is only enough space for a screening forest.

#5: Educate patrons and enforce Academy rules regarding use only of defined trails and disposal of refuse.

4.9 Unavoidable and Cumulative Impact

The campground expansion provides useful services to the public, at low cost, in attractive surroundings. It brings the Academy some goodwill, and revenue for morale-and-welfare programs. It also increases traffic and road maintenance, security and law enforcement concerns connected with a residential population, introduces new sources of pollution, and replaces natural areas with developed areas.

Simply by virtue of its existence, *and however incrementally*, the FAMCAMP Expansion proposal will contribute to:

- Erosion of soils.
- Invasion of non-native plants.
- Proliferation of social trails.

- Conflicts with other Academy activities.
- Increased rates and quantities of storm water runoff.
- Stream and water quality degradation.
- Loss of wildlife habitat leading to human/wildlife conflicts.
- Increased potential for wildfire.

None of these listed effects are considered significant, because of the minor degree to which the proposed action increases the existing impact of FAMCAMP. The construction disruption is temporary, with re-vegetation success depending primarily on ending of the current drought. The small percentage increase in human and vehicle traffic is not readily quantifiable in terms of specific environmental impact. However, based on experience by environmental managers, there is a mutually supporting result as all of these impacts tend to accelerate environmental degradation at greater than arithmetic rates. Should future expansions ever be considered, decision-makers can expect greater negative environmental impact.

5.0 References

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- 2003. Current flyer, 'USAF Academy Peregrine Pines FamCamp,' undated.

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6.1.2 Reviewers

The Academy has an Environmental Impact Analysis Process Subcommittee to the Environmental Protection Committee that provides an organizational review of all environmental assessment actions.

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United States Air Force Academy

10th Civil Engineer Squadron

RUSH!

03-961

Internal Routing Slip

Flight/Division	Date In	Date Out	Comments	Initial
10 CES/CC				
CCE	10/29	10/29		
USAFA/CEC		27 Oct		
CECE				
CECV	23 Oct	23 Oct		pm
CECN	23 Oct	23 Oct		pm
USAFA/CEP				
CEPD				
CEPE				
CEPF				
CEPU				
USAFA/CEO				
10 CES/CEI				
10 CES/CEM				
10 CES/CEF				
CCF				
CSS				
10 CES/CEJ	23 Oct 03	23 Oct 03	for Ed ✓	Ed
10 CES/CEJD	23 Oct 03	→		Ed
10 CES/CEB	23 Oct 03	23 Oct 03		nr
10 CES/CEC				
CECR				
10 CES/CEH				
10 CES/CEO				
CEOC				
CEOS				
10 CES/CER				
CERF				
10 CES/CEV	23 Oct 03	23 Oct 03		nr
10 CES/CEX-VA	23 Oct	23 Oct		AD
10 CES/CEQ				



Date: 23 Oct 03 Initiated By: Jay Carson Due Date: 23 Oct 03

Comments:

Please expedite!

Stream Gauges and Water Quality Trends



FIG. 1. Stream gauges and water quality trends in the Pacific Northwest. Data from 1980 to 1990. Source: U.S. Environmental Protection Agency, 1991.